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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,438	12/11/2006	Kenichi Takahiro	278315US3XPCT	3041
22850 7590 05/21/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER PATEL, VISHAL A				
ART UNIT 3676		PAPER NUMBER		
NOTIFICATION DATE 05/21/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary**Application No.**

10/551,438

Applicant(s)

TAKAHIRO ET AL.

Examiner

Vishal Patel

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-4, 6 and 10-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,942,220 B2 in view of Lew et al. Takahiro discloses all the limitations of claims 1-12 except the metallic ring being an O-ring. Lew discloses to have a seal that is energized by having a V-shape spring or an O-ring or a solid cross section O-ring. It would have been obvious to one having ordinary skill in the art at the time of the invention to have the V-shape spring of Takahiro to be replaced by an O-ring or an O-ring have a solid cross-section as taught by Lew, since having one energizer shape or another energizer shape is considered to be art equivalent.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Unclear how claim 6 can be a metallic O-ring? This contradicts the limitations added in claim 1 on 2/3/09.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson (US. 5,433,456) in view of Balsells et al (US. 5,992,856).

Nicholson discloses a ring shape metal gasket (e.g. gasket of figure 2A) which is disposed between two sealing object members (e.g. this would be the case, when the gasket is placed between two members shown in figure 3) and in which at least two pieces of valley portions (e.g. valley portion in figure 2A that receive elements similar to 28) dented in a second direction perpendicular to a first direction extending from a contact portion of one sealing object member to the other sealing object member are provided, a metallic ring (e.g. metallic ring similar to 28) is fitted to at least one of the valley portions. The at least one of the metallic rings is fitted to the valley portion on a lower pressure side of a fluid side to be sealed and a non-fluid side on the opposite side (this would be the case since two metallic rings are in two valleys and

each faces away from each other). The metallic rings are fitted to all the valley Portions of the ring shaped metal gasket (this is shown in figure 2A). The metallic ring is metallic O-ring (e.g. the metallic ring shown in figure 2A has a cross-section that is an O and hence is an O-ring or since the metallic ring shown in figure 2A is annular and that is why it is considered to be O-ring), metallic irregular cross-section ring or metallic rectangular cross section ring.

Nicholson discloses the invention substantially as claimed above but fails to disclose that a maximum dimension of the metallic ring in a diameter direction of a longitudinal section, in a non-compression state, is larger than a maximum dimension of the metallic ring in a direction perpendicular to the diameter direction (e.g. rectangular cross-section for the metallic ring). Balsells discloses that a gasket having a sealing ring (e.g. 102) having energizing metallic rings (e.g. figures 4, elliptical or oval and figure 6, rectangular) with a maximum dimension of the metallic ring in a diameter direction of a longitudinal section, in a non-compression state, is larger than a maximum dimension of the metallic ring in a direction perpendicular to the diameter direction (see figures 4-6, rings 122, 120, 168 and 166) and the metallic ring is placed in a valley. It would have been obvious to one having ordinary skilled in the art at the time of the invention to have every energizing metallic ring of Nicholson to be replaced by a elliptical or rectangular rings as taught by Balsells, to provide further enhancement of sealing forces that can be achieved by the seal assembly (column 4, lines 39-42 and lines 60-65). Furthermore the reference of Balsells also teaches that mere change in shape is considered to be art equivalent.

7. Claims 1-4, 10, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson in view of Abbes et al (US. 4,603,892).

Nicholson discloses a ring shape metal gasket (e.g. gasket of figure 2A) which is disposed between two sealing object members (e.g. this would be the case, when the gasket is placed between two members shown in figure 3) and in which at least two pieces of valley portions (e.g. valley portion in figure 2A that receive elements similar to 28) dented in a second direction perpendicular to a first direction extending from a contact portion of one sealing object member to the other sealing object member are provided, a metallic ring (e.g. metallic ring similar to 28) is fitted to at least one of the valley portions. The at least one of the metallic rings is fitted to the valley portion on a lower pressure side of a fluid side to be sealed and a non-fluid side on the opposite side (this would be the case since two metallic rings are in two valleys and each faces away from each other). The metallic rings are fitted to all the valley Portions of the ring shaped metal gasket (this is shown in figure 2A). The metallic ring is metallic O-ring (e.g. the metallic ring shown in figure 2A has a cross-section that is an O and hence is an O-ring or since the metallic ring shown in figure 2A is annular and that is why it is considered to be O-ring), metallic irregular cross-section ring or metallic rectangular cross section ring.

Nicholson discloses the invention substantially as claimed above but fails to disclose that a maximum dimension of the metallic ring in a diameter direction of a longitudinal section, in a non-compression state, is larger than a maximum dimension of the metallic ring in a direction perpendicular to the diameter direction (the metallic ring is oval or elliptical). Abbes discloses that a gasket having a sealing ring (e.g. 22) having energizing metallic rings (e.g. figures 2, elliptical or oval) with a maximum dimension of the metallic ring in a diameter direction of a longitudinal section, in a non-compression state, is larger than a maximum dimension of the metallic ring in a direction perpendicular to the diameter direction (see figures 2) and the

metallic ring is placed in a valley. It would have been obvious to one having ordinary skill in the art at the time of the invention to have every energizing metallic ring of Nicholson to be replaced by a elliptical rings as taught by Abbes, to provide a right connection device having a flexible metal joint (column 2, lines 15-20 of Abbes).

8. Claims 1-3 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halling (US. 6,588,761), and further in view of Abbes et al (US. 4,603,892).

Halling discloses a ring shape metal gasket (e.g. gasket of figure 7) which is disposed between two sealing object members (e.g. this would be the case, when the gasket is placed between two members shown in figure 3) and in which at least three pieces of valley portions (e.g. valley portion in figure 7 that receive element 770) dented in a second direction perpendicular to a first direction extending from a contact portion of one sealing object member to the other sealing object member are provided (figures 9A and 9B by way of example of sealing gasket presented in figure 7). The valley portions have different sizes (e.g. top valley has different size than the middle valley). The middle valley (e.g. figure 7) of any resilient material and any shape (column 6, lines 24-25). The valley portion on the lower pressure side of the gasket is smaller than the valley portion on a high pressure side of the gasket (as shown in figure 7, the middle valley is smaller than the other valley portions). The valley portion on the low temperature side of the gasket is smaller than the valley portion on a higher temperature side of the gasket (this would be the case since the pressure and temperature on the two valleys is internal or process side and hence would be higher, see example of use shown in figures 9A-9B).

Halling does not state that the cross-section shape is elliptical or oval and/or the resilient ring is metallic. Abbes discloses that a gasket having a sealing ring (e.g. 22) having energizing

metallic rings (e.g. figures 2, elliptical or oval) with a maximum dimension of the metallic ring in a diameter direction of a longitudinal section, in a non-compression state, is larger than a maximum dimension of the metallic ring in a direction perpendicular to the diameter direction (see figures 2) and the metallic ring is placed in a valley. It would have been obvious to one having ordinary skill in the art at the time of the invention to have the resilient ring of Halling to be replaced by a elliptical rings as taught by Abbes, to provide a right connection device having a flexible metal joint (column 2, lines 15-20 of Abbes).

Response to Arguments

9. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. P./
Primary Examiner, Art Unit 3676

/Vishal Patel/
Primary Examiner, Art Unit 3676